

Annual Progress Report (APR)



2026 Air Quality Annual Progress Report (APR) for West Lothian Council

In fulfilment of Part IV of the Environment Act 1995, as amended by the Environment Act 2021

Local Air Quality Management

June 2026

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Executive Summary: Air Quality in Our Area

Air Quality in West Lothian Council

West Lothian Council has continued to review and assess air quality throughout the district during 2025 to determine whether Scottish air quality objectives are likely to be achieved. Overall, there were no objective exceedances recorded throughout the West Lothian Council air quality monitoring network and the air quality in the area remains good.

Air pollutants Nitrogen Dioxide (NO₂) and fine particulates (PM₁₀ & PM_{2.5}), which are mainly associated with vehicle emissions and domestic fuel burning, have been measured using a network of three automatic continuous air quality monitoring stations located in Linlithgow, Broxburn and Newton.

Additionally, there is also a network of 30 NO_x passive diffusion tubes located at 24 sites throughout West Lothian. There is one tube located at 21 sites and three tubes co-located with the air quality monitoring stations at Broxburn, Linlithgow and Newton (Sites DT4, DT14 and DT2N respectively) – we also employ 1 travel tube (a travel tube is a control diffusion tube used in air quality monitoring to ensure the accuracy of the results. It accompanies the active samplers during transit but remains closed, helping to identify and subtract any unintended pollutant contamination that occurs before or after deployment). The locations of all the diffusion tubes can be found on the Air Quality in Scotland website: <https://www.scottishairquality.scot/latest>

A diffusion tube location map (Figure 5) is also provided in Appendix C, page 47.

The 2025 monitoring data at all three continuous air quality monitoring stations has shown that the NO₂, PM₁₀ and PM_{2.5} long term average air quality objectives have been comfortably met. NO₂ concentration levels remained the same at Broxburn, decreased at Linlithgow and very slightly increased at the Newton site, from concentration levels in 2024. There were no exceedances of the short term NO₂ objective at any of the three sites. West Lothian Council also measured PM₁₀ concentrations at three sites during 2025. The levels detected were higher than the previous year, at all three continuous monitoring sites. Two exceedances of the PM₁₀ short term average were measured. However, this concentration level is not to be exceeded more than 7 times a year, so the

objective is still comfortably met. In addition, PM_{2.5} levels were monitored and found to be higher than levels found in the previous year, at all three continuous monitoring sites.

In relation to the diffusion tube data, it can be noted that during 2025, the vast majority of the measured concentrations have increased since the previous year. Three diffusion tube locations have seen a slight reduction in measured levels (DT5N, DT7N and DT21 - Edinburgh Road, Broxburn, Alderstone Road, Livingston & Main Street, East Calder), whilst at DT17N (Hopetoun Street, Bathgate) the measured level has remained the same as the previous year.

Actions to Improve Air Quality

West Lothian Bikeability

Bikeability activities have continued during 2025. The scheme set a target to have 35 primary schools within West Lothian delivering Level 2 Bikeability to their pupils, during the academic year. Whilst the scheme missed that target by 1 school, it is another record high for West Lothian Schools. The scheme aimed to exceed its target number of individual pupils, set at 750 pupils receiving Level 2 Bikeability training. As a result, slightly more than 50% of West Lothians primary schools will be delivering essential on road cycle training (Level 2 Bikeability) to the young people of West Lothian. The longer-term goal is to achieve 100% of Primary Schools in West Lothian delivering Level 2 Bikeability training to their pupils ensuring all children attending a Primary School in West Lothian will have the opportunity to participate in essential cycle training. Cycle training is an essential life skill which will help us move to a more sustainable future. It is also an important part of every child's learning and development.

Bikeability achievements at a glance during the 2025 academic year;

- Primary Schools contacted = 68
- Schools visited = 37
- Schools utilising Bikeability Loan Bikes = 25
- Schools delivered Level 1 Bikeability (terms 1-3) = 31
- Schools planning to deliver Level 1 Bikeability (term 4) = 5
- Schools delivered Level 2 Bikeability (terms 1-3) = 28
- Schools planning to deliver Level 2 Bikeability (term 4) = 7

Other Bikeability achievements for 2025;

- 4 Bikeability Scotland instructor courses ran for teachers and volunteers in West Lothian;
- Planned maintenance for Bikeability Cycle Fleet;
- Cycle kits for schools who have a member of staff trained as a Bikeability Scotland instructor;
- Work with West Lothian bike library for the use of adaptive bikes to ensure cycle training is inclusive to all;
- ‘Dr. Bikes’ sessions for pupils to have their bikes checked over;
- Increasing engagement from schools enquiring about Bikeability with lots of positive feedback

Vehicles Emission Partnership

West Lothian Council also continued to provide the management and administration support for the East Central Scotland Vehicle Emissions Partnership (VEP) during 2025, which is a collaboration with Stirling, East Lothian, Midlothian and Falkirk Councils. The remit of the VEP is to assist in reducing vehicle emissions by encouraging drivers to switch off their engine whenever possible, promote good travel modes and vehicle choices and handle idling and emissions complaints. In addition, the VEP uses a broad variety of advertising media to encourage change in driving habits across the councils’ areas. Media used includes local TV, radio, public transport networks such as buses and social media. Further information can be found at the VEP’s [Switch Off and Breathe](#) website. The majority of complaints/enquiries received by the partnership is via the webform which is available on the website.

The main focus of the partnership for 2025 was engagement with schools – to deal with vehicle idling issues associated with the number of vehicles dropping children off and picking them up.

The 2025 advertising campaign had to be drastically reduced due to the reduction in the budget provided by the Scottish Government. The media campaign therefore focused on the website, social media and radio coverage. A two-minute animation was also developed [Switch Off & Breathe animation](#)

Idling Complaints/Enquiries

Around 50% of the vehicle idling complaints and enquiries came from outside the

partnership area, mainly due to the advertising campaign, which covers the whole of the East Central Scotland belt. Letters are sent to registered owners of vehicles reported to have been idling. This action has led to positive outcomes in the majority of cases. On receiving letters, most people responded by phone call or e-mail. Once the reasons behind the campaign were explained to them, they could see the sense of switching off even if they didn't agree. This generally resulted in a change of behaviour. In addition, 'Switch Off' signage has also been deployed as a first response to idling complaints, for example outside of schools.



Example Signage in use for the Scottish Vehicle Emissions Partnership

Local Priorities and Challenges

Although the three Air Quality Management Areas at Newton, Broxburn and Linlithgow were revoked in 2024, West Lothian Council has continued to monitor NO₂, PM₁₀ and PM_{2.5} at the same continuous monitoring sites in Newton, Broxburn & Linlithgow. At the end of 2025, a review of diffusion tube locations was undertaken and any changes made will be implemented for 2026. Funding applications will continue to be made to the Scottish Government for local air quality management.

How to Get Involved

If you would like to find out more about air quality within West Lothian, please visit the [Air Pollution](#) pages of our website. There are three automatic air quality monitoring sites across the West Lothian Council area. The air quality data from all 3 sites can be viewed on the [Scottish Air Quality](#) website map.

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1 Local Air Quality Management

This report provides an overview of air quality in West Lothian during 2025. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995), as amended by the Environment Act (2021), and the relevant Policy and Technical Guidance documents.

The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their area, and to determine whether or not the air quality objectives are likely to be achieved. Where an exceedance is considered likely the local authority must declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives. This Annual Progress Report (APR) summarises the work being undertaken by West Lothian Council to improve air quality and any progress that has been made.

Table 1.1 – Summary of Air Quality Objectives in Scotland

Pollutant	Air Quality Objective Concentration	Air Quality Objective Measured as	Date to be Achieved by
Nitrogen dioxide (NO ₂)	200 µg/m ³ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
Nitrogen dioxide (NO ₂)	40 µg/m ³	Annual mean	31.12.2005
Particulate Matter (PM ₁₀)	50 µg/m ³ , not to be exceeded more than 7 times a year	24-hour mean	31.12.2010
Particulate Matter (PM ₁₀)	18 µg/m ³	Annual mean	31.12.2010
Particulate Matter (PM _{2.5})	10 µg/m ³	Annual mean	31.12.2021
Sulphur dioxide (SO ₂)	350 µg/m ³ , not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
Sulphur dioxide (SO ₂)	125 µg/m ³ , not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
Sulphur dioxide (SO ₂)	266 µg/m ³ , not to be exceeded more than 35 times a year	15-minute mean	31.12.2005
Benzene	3.25 µg/m ³	Running annual mean	31.12.2010
1,3 Butadiene	2.25 µg/m ³	Running annual mean	31.12.2003
Carbon Monoxide	10.0 mg/m ³	Running 8-Hour mean	31.12.2003

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

Air Quality Management Areas (AQMA) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the authority must prepare publish and implement an Air Quality Action Plan (AQAP) within the shortest possible time and no later than 12 months of the date of AQMA Designation Order. The AQAP must set out measures the local authority intends to put in place in pursuit of the objectives within the shortest possible time. Measures should be provided with milestones and a final date for completion. The action plan itself should have a timescale for completion and for revocation of the AQMA. Where measures to reduce air pollution may require a longer timescale an action plan shall be reviewed and republished within five years of initial publication and then five-yearly thereafter.

West Lothian Council currently does not have any AQMAs.

2.2 Implementation of Air Quality Action Plan(s) and/or measures to address air quality

West Lothian Council does not currently have any Air Quality Action Plans in place. However, there are several initiatives that the Council implement, that are likely to have a beneficial impact on air quality. Details are summarised below and details of all measures completed, in progress or planned are set out in Table 2.1.

Key completed measures for this reporting year are:

- Environmental Health continued to refer to the Air Quality Supplementary Planning Guidance when assessing larger scale planning applications;
- Replacement of two rapid chargers at Livingston Stadium and Xcite Whitburn and upgrading of a number of fast chargers to improve reliability and allow contactless payment for users;
- Participation in South of Scotland Electric Vehicle Charging Strategy
- West Lothian Council planning department continue to make use of the statutory guidance 'Residential Development Guide'. This guidance specifically provides advice to developers on air quality considerations during the planning application

process. It also sets out expectations on EV charging point provision, heat pump requirements and active travel considerations when planning residential sites.

Progress on the following measures has been slower than expected due to reduced budget from Scottish Government for electric vehicle provision;

- Electric Vehicle provision in Council pool car fleet;

There has also been a delay in removing solid fuel fires from Council properties in the village of Newton. This will not progress until properties become vacant.

West Lothian Council expect the updated Local Development Plan (LDP2) to include measures to consider air quality issues. The review of the Local Development Plan will likely take place during 2026, in accordance with the timescales set out by the planning authority.

Table 2.1 – Progress on Measures to Improve Air Quality

Measure No.	Measure	Category	Expected/Actual Completion year	Organisations Involved	Measure Status	Funding Status	Key Milestones	Progress	Barriers to implementation
1	Electric Vehicle Charging Point Infrastructure	Promoting low emission transport	Ongoing	West Lothian Council	Measured through collaboration project with other authorities in South of Scotland – see below	See below for details of funding awarded to South of Scotland Electric Vehicle Charging Collaboration	Installation of EV charging points and bays	Ongoing programme of installing chargers on Council land	Generic barriers such as funding and infrastructure requirements i.e. the availability of suitable electricity supplies
2	Member of South of Scotland Electric Vehicle Charging Strategy	Promoting low emission transport	Ongoing. Procurement process during 2025. New supplier chosen to maintain the network from 2026	City of Edinburgh, Clackmannanshire, Dumfries and Galloway, Falkirk, Fife, Midlothian, Scottish Borders, and West Lothian	Defined actions and targets to be met by the chosen supplier, which will be reviewed and monitored. Ongoing community engagement	The Electric Vehicle infrastructure Fund Funding from individual authorities Scot Govt. funding awarded	10% of parking spaces in key West Lothian Council owned car parks will be EV by 2026. Over 50% of households with no off-road car parking in West Lothian will be within a reasonable walk of a charging site by 2026.	Ongoing into 2026. A new maintenance/management provider has been appointed during 2025	Charge point availability for residents in flats Ensuring the correct infrastructure is available Large projected demand for EV charging points
3	Review West Lothian Council's supplementary Air Quality Guidance	Policy guidance and development control	Progress has been slow due to other commitments.	West Lothian Council	Planned to progress when other commitments allow	Not applicable	Guidance assists Officers in considering air quality in the planning process	In Progress	The guidance is non-statutory only
4	Removal of solid fuel fires in Council Housing in Newton	Domestic solid fuel burning	Ongoing	West Lothian Council	Ongoing when properties become vacant	Funding is via the Housing Revenue Account	Installation of air source heat Pumps in all 12 Council	Will be completed when the 5	Current tenants may wish to keep their solid fuel fire

						budget which is part of a 5 year housing capital improvements programme budget for Council owned housing stock	properties in Newton. 7 homes have been completed, 5 still to go	homes become void	
5	Inclusion of Air Quality in the West Lothian Local Development Plan	Policy guidance and development control	It will be looked at, as part of the Local Development Plan review during 2026	West Lothian Council	Proposed for 2026 when LDP2 is progressed	Not applicable	LDP2 is progressed by the Planning Department, so milestones will be determined by the LDP2 program of works	To be progressed during 2026	Staff resources to allow the review to take place
6	Electric pool cars available for Council staff use during 2025	Promoting low emission transport	Ongoing but numbers of EV vehicles are steadily reducing due to costs	West Lothian Council	Completed	Funding was previously awarded annually through the Scot Govt's Switched on Fleets programme	Reduction in fleet numbers by 17 vehicles during 2025, due to contracts for EV vehicles ending. Went from 43 to 26 electric vehicles within the Council fleet in 2025	Numbers of EV vehicles within WLC continue to reduce	Reduced Government funding available to WLC to be able to lease electric vehicles as part of its fleet provision
7	Member of the East Central Scotland Vehicle Emissions Partnership (ECSVEP)	Promoting low emission transport	Ongoing during 2025 – unsure of future for 2026	West Lothian Council, Stirling, East Lothian, Mid Lothian & Falkirk Councils	Member of the partnership to help reduce vehicle idling, the reporting of idling complaints, enforcing of fixed penalty notices and the provision of educational resources for the public	Scottish Government funded	Anticipated reduction in emissions mainly in town centre areas through anti-idling enforcement. Provides the public with a means to report idling complaints and smoky vehicles	The VEP continues to promote anti-idling in the West Lothian Council area with various complaints investigated and improvements in campaigns and advertising	Reduction in SG grant funding would mean that sufficient progress could not be made to promote idling awareness

2.3 Air Quality Complaints Relating to Activities and / or Smoke Emissions

West Lothian Council investigated a total of 112 air quality complaints related to burning activities and/or emissions of smoke during the reporting year of 2025. These complaints were classified as the following within the Environmental Health complaints database;

Bonfires Domestic – 68 requests for service

Smoke Domestic Chimney – 20 requests for service

Smoke Industrial/Commercial – 3 requests for service

Bonfire Industrial/Commercial – 21 requests for service

Of the complaints received, 100% have been fully resolved following investigation.

Investigations were undertaken in accordance with the Clean Air Act 1993 and/or the Environmental Protection Act 1990. Where necessary, officers provided advice to complainants, referred those involved to advice on our website and by writing to those allegedly carrying out the burning. On occasion, we may ask complainants to keep a log of when burning is occurring. Environmental Health also advise complainants to refer the issue onto SEPA where there is an allegation of waste materials being burned – this could be in a domestic or commercial setting.

Enforcement actions undertaken during the reporting year include:

- No formal enforcement action was required;
- Informal warnings or advisory letters were issued;

The information provided above is in line with what can be produced from the Environmental Health complaints database. The database is not readily set up to be able to generate the exact information required by this report, due to the way that individual complaints are categorised.

3 Air Quality Monitoring Data and Comparison with Air Quality Objectives

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

This section sets out what monitoring has taken place and how local concentrations of the main air pollutants compare with the objectives.

West Lothian Council undertook automatic (continuous) monitoring at 3 sites during 2025. Table A.1 in Appendix A shows the details of the sites. National monitoring results are available at [Air Quality in Scotland](#).

Maps showing the location of the monitoring sites are provided in Appendix C. Further details on how the monitors are calibrated and how the data has been adjusted are included in Appendix C.



Linlithgow Automatic Continuous Monitoring Station – High Street Linlithgow

3.1.2 Non-Automatic Monitoring Sites

West Lothian Council undertook non- automatic (passive) monitoring of NO₂ at 24 sites during 2025. Table A.2 in Appendix A shows the details of the sites.

Maps showing the location of the monitoring sites are provided in Appendix C. Further details on Quality Assurance/Quality Control (QA/QC) and bias adjustment for the diffusion tubes are included in Appendix C.

3.1.3 Other Monitoring Activities

There was no other monitoring activities carried out within West Lothian Council during 2025.

3.2 Individual Pollutants

The air quality monitoring results presented in this section are, where relevant, adjusted for annualisation and bias. Further details on adjustments are provided in Appendix C.

3.2.1 Nitrogen Dioxide (NO₂)

Table A.3 in Appendix A compares the ratified monitored NO₂ annual mean concentrations for the past five years with the air quality objective of 40 µg/m³ at automatic monitoring sites. The table shows that the annual mean objective was met at all three continuous monitoring sites. NO₂ levels were very similar to the previous year's data at all three continuous monitoring sites.

Table A.4 in Appendix A compares the adjusted monitored NO₂ annual mean concentrations for the past five years with the air quality objective of 40 µg/m³ at non automatic monitoring (diffusion tubes) sites. There were no exceedances of the objective level at any of the non-automatic monitoring sites.

For diffusion tubes, the full 2025 dataset of monthly mean values is provided in Appendix B.

Table A.5 in Appendix A compares the ratified continuous monitored NO₂ hourly mean concentrations for the past five years with the air quality objective of 200 µg/m³, not to be exceeded more than 18 times per year. There were no exceedances of this objective for

2025. West Lothian Council has consistently met this objective at the 3 continuous monitoring stations over the last five years.

3.2.2 Particulate Matter (PM₁₀)

Table A.6 in Appendix A compares the ratified and adjusted monitored PM₁₀ annual mean concentrations for the past five years with the air quality objective of 18 µg/m³. All three continuous monitoring sites have remained within the objective limit during 2025. However, measured levels had slightly increased from the previous few years data.

Table A.7 in Appendix A compares the ratified continuous monitored PM₁₀ daily mean concentrations for the past five years with the air quality objective of 50 µg/m³, not to be exceeded more than seven times per year. There were 2 exceedences of this objective during 2025.

3.2.3 Particulate Matter (PM_{2.5})

Table A.8 in Appendix A compares the ratified and adjusted monitored PM_{2.5} annual mean concentrations for the past five years with the air quality objective of 10 µg/m³.

There were no exceedences of the objective level during 2025, however, the measured levels were above that of the previous year.

3.2.4 Sulphur Dioxide (SO₂)

During 2025 there was no monitoring of SO₂ carried out in West Lothian.

3.2.5 Carbon Monoxide, Lead and 1,3-Butadiene

During 2025 there was no monitoring of Carbon Monoxide, Lead and 1,3-Butadiene carried out within West Lothian.

4 New Local Developments

The following planning applications from 2025 required an Air Quality Impact Assessment (AQIA);

0077/P/25 - Planning permission in principle for a mixed-use development including housing, neighbourhood centre, site for primary school, employment uses and open space with associated transportation, drainage and landscape infrastructure (EIA Development) (Grid Ref: 302635,665503) Land at Gavieside Farm, Livingston, West Lothian, EH55 8PT.

Application details can be viewed here -

<https://planning.westlothian.gov.uk/publicaccess/simpleSearchResults.do?action=firstPage>

When the AQIA was assessed, the following points were noted – an increase in exposure to NO₂ along western access route of the site. The impact of PM₁₀ and PM_{2.5} on sensitive receptors is of negligible significance. The odour from the nearby poultry farm was not accessed as it is assumed it will cease operations.

0436/P/25 – Planning permission in principle for the development of site for residential development (class 9), local centre with mixed uses (classes 1A, 3, 4, 10,11), open space, parkland, landscaping, active travel, public transport, access, parking, and infrastructure works, with detailed design and layout for phase 1 (503 units) (EIA development) (Grid Ref: 308281,672246) Land At Greendykes Road, Broxburn, West Lothian, EH52 5AF

Application details can be viewed here-

<https://planning.westlothian.gov.uk/publicaccess/simpleSearchResults.do?action=firstPage>

No issues were noted with AQIA submitted with the application. However, it was noted that a dust management plan would be required to be submitted with any full planning application.

1007/P/25 – Residential development (located to the south of canal only), with associated access, parking, landscaping, open space, earthworks and other infrastructure (Grid Ref:301949,677223) Land To The North And South Of The Union Canal, Wilcoxholm Farm, Edinburgh Road, Linlithgow, West Lothian, EH49 6QT

Application details can be viewed here –

<https://planning.westlothian.gov.uk/publicaccess/simpleSearchResults.do?action=firstPage>

No issues were noted with AQIA submitted with the application.

4.1 Road Traffic Sources

Between 1st January 2025 and 31 December 2025, West Lothian Council adopted the following roads / streets;

- McGregor Crescent & Mickel Crescent, Whitburn
- Blackburnhall Gardens, Blackburn
- Mansefield Place, East Calder
- Owen Square, Livingston
- Dyers Drive, Boghall Terrace & Oaktree Gardens, Linlithgow
- Finlay Drive, Bathgate
- Ferguson Place, Bathgate
- Scaldlaw Walk, Bonaly Lane, Carnethy Walk, East Kip Walk & Torduff Walk, Livingston
- Cathcart Court, Calderwood, East Calder
- Helen Morgan Gardens, Blackridge
- Mossend Grove, Polbeth
- Church Grove, Winchburgh
- Church Place, Winchburgh
- Campbell Drive & Cairns Gardens, Calderwood, East Calder
- Baillie Crecent, Calderwood, East Calder
- West Bonnington Road & West Bonnington Drive, Wilkieston
- Carnegie Court, Calderwood, East Calder
- Kaims Crescent ,Livingston
- Seven Wells Crescent, Calderwood, East Calder
- Buchan Square, Calderwood, East Calder
- Bruce Way, Calderwood, East Calder

The Council only hold record of the roads following adoption, so it is important to note that others will have been constructed and placed on a 12-month pre- adoption maintenance period.

There was no information provided on any new narrow congested streets constructed with residential properties close to the kerb. No new busy streets were constructed where people may spend one hour or closer to traffic. There were no new roads with significantly changed traffic flows, no roads with new/changed layout and no new bus or coach stations were constructed in 2025.

4.2 Other Transport Sources

There were no new other transport sources in 2025.

4.3 Industrial Sources

SEPA was contacted and advised that there were no new, or substantially varied Pollution, Prevention and Control (PPC) or Waste Management Licensing (WML) activities in the West Lothian local authority area recorded for 2025.

4.4 Commercial and Domestic Sources

During 2025, there were no new Biomass combustion plants in West Lothian, no areas where the combined impact of several biomass combustion sources may be relevant and no new combined heat and power (CHP) plants.

During 2025, West Lothian Council have continued to receive complaints in relation to smoke and odour from domestic sources such as wood burning stoves and open bonfires in gardens. These complaints were investigated and advice was provided on burning and smoke control area rules. Guidance is provided by West Lothian Council Environmental Health during the initial planning consultation of any new residential or commercial developments who may be considering installing new combustion appliances such as wood burning stoves. This may include providing information on DEFRA approved stoves, authorised fuels and providing advice on flue heights which will allow effective smoke dispersal to minimise smoke and odour nuisance complaints.

Installation of wood burning stoves continued to grow in West Lothian during 2025. Across the district there have been a total of 11 applications in which Environmental Health have been consulted on that included plans for the installation of a wood burning stove. These applications are generally given consent subject to acceptable flue height and applicants

are given advice in line with DEFRA requirements for exempt appliances and authorised fuels. During 2021, the Environmental Health team started recording the details of wood burning stove applications which assists in identifying potential hot spot areas.

A map of the smoke control area within West Lothian can be viewed at the following link:

https://www.westlothian.gov.uk/media/4233/Smoke-Control-AreasMap/pdf/Smoke_Control_Areas_Map.pdf?m=1404985283643

There were no applications for any larger scale commercial or domestic developments during 2025.

4.5 New Developments with Fugitive or Uncontrolled Sources

There were no new fugitive or uncontrolled sources during 2025.

5 Planning Applications

West Lothian Councils Local Development Plan (LDP1) has identified a number of sites for large scale development since 2018. Each development site shall be assessed for the impact on air quality through the planning process. Where appropriate, detailed air quality impact assessments will be required to be submitted. There were planning applications received during 2025 that required an Air Quality Impact Assessment (AQIA or EIA) in West Lothian. The following planning applications required an AQIA:

0077/P/25 Gavieside, Livingston - Planning permission in principle for a mixed-use development including housing, neighbourhood centre, site for primary school, employment uses and open space with associated transportation, drainage and landscape infrastructure (EIA Development)

0436/P/25 Greendykes Road, Broxburn - Planning permission in principle for the development of a 67.2ha site for residential development (class 9), local centre with mixed uses (classes 1A, 3, 4, 10,11), open space, parkland, landscaping, active travel, public transport, access, parking, and infrastructure works, with detailed design and layout for phase 1 (503 units) (EIA development)

1007/P/25 Wilcoxholm, Linlithgow - Planning permission in principle for a 21.7ha residential development (located to the south of canal only), with associated access, parking, landscaping, open space, earthworks and other infrastructure

6 Conclusions and Proposed Actions

6.1 Conclusions from New Monitoring Data

The 2025 monitoring data at all three continuous air quality monitoring stations has shown that the NO₂, PM₁₀ and PM_{2.5} long term average air quality objectives have been met, and compliance has been achieved with the target air quality objectives. NO₂ levels remained the same at Broxburn, decreased at Linlithgow and slightly increased at the Newton site, from the levels detected in 2024. There were no exceedances of the short term NO₂ at any of the three sites during 2025.

West Lothian Council measured PM₁₀ concentrations at 3 sites during 2025. There were no exceedances of the objective levels during 2025. The levels detected were found to be higher than the previous year, at all three sites. The PM₁₀ daily mean concentrations had 2 exceedances of the 50 µg/m³ objective for 2025. This objective is not to be exceeded more than seven times per year.

In addition, PM_{2.5} levels were monitored and found to higher than levels measured in 2024, at all three continuous monitoring sites.

In relation to the diffusion tube data, it can be noted that during 2025, the vast majority of the measured concentrations have increased from last years measured levels. Three diffusion tube locations have seen a slight reduction in measured levels (DT5N, DT7N and DT21 - Edinburgh Road, Broxburn, Alderstone Road, Livingston & Main Street, East Calder), whilst at DT17N (Hopetoun Street, Bathgate) the measured level has remained the same as the previous year. Whilst most levels have increased, diffusion tube concentrations continue to be well below target objective levels.

There appears to be no obvious reason for the increase in measured levels of pollutants. It may be that atmospheric conditions have led to a slight increase in levels across the board during 2025. With increasing electric and hybrid car usage amongst the general population, it would seem more likely that levels would be remaining steady or decreasing slowly.

6.2 Conclusions relating to New Local Developments

There have been no new local developments that have the potential to introduce new exceedances of relevant air quality objectives in West Lothian. The Council has begun the process of preparing a new Local Development Plan for West Lothian. It is hoped that this will be adopted by the end of 2026. This will identify any residential sites in and around former AQMA's. As part of this new LDP2, the Supplementary Planning and Air Quality Guidance will be reviewed. It is possible that any new developments around former Air Quality Management Areas will introduce further traffic related emissions in the future, and applicants may be required to submit an Air Quality Impact Assessment (AQIA) as part of the planning process. There may also continue to be increased demand from domestic households in relation to the installation of alternative heat and power sources in their homes. The installation of wood burning stoves continues to be popular, and West Lothian Council will assess these on a case by case basis, in line with relevant guidance.

6.3 Proposed Actions

The 2025 monitoring data at all three continuous air quality monitoring stations has shown that the NO₂, PM₁₀ and PM_{2.5} long term average air quality objectives have been comfortably met.

NO₂ levels remained the same at Broxburn, decreased at Linlithgow and very slightly increased at the Newton site, from the levels detected in 2024. There were no exceedances of the short term NO₂ at any of the three sites.

West Lothian Council also measured PM₁₀ concentrations at three sites during 2025. The levels detected were higher than the previous year, at all three continuous monitoring sites. The PM₁₀ daily mean concentrations had 2 exceedances of the 50 µg/m³ objective for 2025. This objective is not to be exceeded more than seven times per year.

In addition, PM_{2.5} levels were monitored and found to higher than levels measured in 2024, at all three continuous monitoring sites.

In relation to the diffusion tube data, it can be noted that during 2025, the vast majority of the measured concentrations have increased since the previous year. Three diffusion tube locations have seen measured levels go down (DT5N, DT7N and DT21 - Edinburgh Road, Broxburn, Alderstone Road, Livingston & Main Street, East Calder), whilst at DT17N (Hopetoun Street, Bathgate) the measured level has remained the same as the

previous year. Whilst most levels have increased, diffusion tube concentrations continue to be well below target objective levels.

There appears to be no obvious reason for the increase in measured levels of pollutants. It may be that atmospheric conditions have led to a slight increase in levels across the board during 2025. With increasing electric and hybrid car usage amongst the general population, it would seem more likely that levels would be remaining steady or decreasing slowly.

It is not proposed to carry out any additional monitoring during 2026, given the results measured. West Lothian Council will continue to have an annual review of diffusion tube locations, to ensure that they are in the best location to monitor any issues.

The next course of action is to submit the Air Quality Annual Progress Report when it is due.

Appendix A: Monitoring Results

Table A.1 – Details of Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Which AQMA?	Monitoring Technique	Distance to Relevant Exposure (m) ^(1,2)	Distance to kerb of nearest road (m) ⁽²⁾	Inlet Height (m)
CM1	Linlithgow High Street	Roadside	300426	677172	NO ₂ ; PM ₁₀ ; PM _{2.5}	N	N/A	FIDAS 200; T200 API NO _x Analyser	4	1.36	2.32
CM2	Broxburn CNC	Roadside	308314	672231	NO ₂ ; PM ₁₀ ; PM _{2.5}	N	N/A	FIDAS 200; T200 API NO _x Analyser	3.5	2.20	2.36
CM3	Newton CNC	Roadside	309258	677728	NO ₂ ; PM ₁₀ ; PM _{2.5}	N	N/A	FIDAS 200; Serinus 40 NO _x Analyser	1.8	1.92	2.41

Notes:

(1) 0m if the monitoring site is at a location of exposure (e.g. installed on the façade of a residential property).

(2) N/A if not applicable.

Table A.2 – Details of Non-Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Tube co-located with a Continuous Analyser?	Tube Height (m)
DT1N	Newton new site	Roadside	309187	677663	NO ₂	No	0.5	1.9	N	2.3
DT2N	Newton CNC (3 co-located diffusion tubes)	Roadside	309251	677723	NO ₂	No	1.9	1.9	Y	2.3
DT3N	Pumpherston Road, Uphall Station	Roadside	306061	670495	NO ₂	No	1.2	1.8	N	2.4
DT4	Broxburn CNC (3 co-located diffusion tubes)	Roadside	308314	672231	NO ₂	No	3.2	1.7	Y	2.5
DT5N	Edinburgh Road, Broxburn	Roadside	308856	672226	NO ₂	No	3.4	2.4	N	2.5
DT6	Cedric Rise, Dedridge	Urban background	306403	666341	NO ₂	No	2.5	1.6	N	2.4
DT7N	Alderstone Road, Livingston	Roadside	304630	666968	NO ₂	No	4.5	1.7	N	2.4
DT8	Whitburn Partnership Centre	Roadside	294687	665030	NO ₂	No	2	0.5	N	2.2

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Tube co-located with a Continuous Analyser?	Tube Height (m)
DT9	Armadale Cross	Roadside	293842	668588	NO ₂	No	3	1.4	N	2.3
DT10N	Armadale South Street	Roadside	293473	668944	NO ₂	No	4.1	1.8	N	2.4
DT11	Bathgate Steelyard	Roadside	297467	668734	NO ₂	No	Façade	2	N	2.5
DT12	Bathgate King St	Roadside	297570	668586	NO ₂	No	5	4	N	2.5
DT13	Bathgate High St	Urban Background	297656	669298	NO ₂	No	3	10	N	1.5
DT14	Linlithgow CNC (3 co-located diffusion tubes)	Roadside	300412	677124	NO ₂	No	4	1.36	Y	2.5
DT15	Linlithgow NW High St	Roadside	299930	677070	NO ₂	No	2	1.4	N	2.4
DT16	Linlithgow SW High St	Roadside	299911	677052	NO ₂	No	2	2.9	N	2.3

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Tube co-located with a Continuous Analyser?	Tube Height (m)
DT17N	Hopetoun St, Bathgate	Roadside	297456	668937	NO ₂	No	Façade	1.5	N	2.3
DT18N	Polkemmet Rd, Whitburn	Roadside	293382	664399	NO ₂	No	20	2.2	N	2.4
DT19N	Manse Road, Whitburn	Roadside	294668	664931	NO ₂	No	6.2	1.7	N	2.4
DT20	Linlithgow High Street S (Old Post Office pub)	Roadside	300405	677118	NO ₂	No	Façade	3	N	2.7
DT21	Main St, East Calder	Roadside	308641	667912	NO ₂	No	2.0	1.8	N	2.7
DT22	Butcher's, Winchburgh	Roadside	308957	675025	NO ₂	No	Façade	1.8	N	2.5
DT23	Main St, Winchburgh	Roadside	309133	675028	NO ₂	No	Façade	1.5	N	2.7
DT24N	Barber's, Linlithgow	Roadside	299957	677067	NO ₂	No	Façade	2.8	N	2.4

Notes:

(1) 0m if the monitoring site is at a location of exposure (e.g. installed on/adjacent to the façade of a residential property).

(2) N/A if not applicable.

Table A.3 – Annual Mean NO₂ Monitoring Results: Automatic Monitoring (µg/m³)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
CM1	300426	677172	Roadside	N/A	97.7	19.6	17.3	20	18.8	15.2
CM2	308314	672231	Roadside	N/A	97.4	22	21.4	22.4	19.2	19.2
CM3	309258	677728	Roadside	N/A	99.0	15.7	12.7 (11.4)	13	11.3	11.9

Notes:

Exceedances of the NO₂ annual mean objective of 40 µg/m³ are shown in bold.

NO₂ annual means exceeding 60 µg/m³, indicating a potential exceedance of the NO₂ 1-hour mean objective are shown in **bold and underlined**.

Means for diffusion tubes have been corrected for bias. All means have been “annualised” as per LAQM.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

Table A.4 – Annual Mean NO₂ Monitoring Results: Non-Automatic Monitoring (µg/m³)

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
DT1N*	309187	677663	Roadside	N/A	100	-	11.0	11.7	11.3	11.5
DT2Na*, DT2Nb, DT2Nc	309251	677723	Roadside	N/A	100	-	14.1	13.2	11.8	12.0
DT3N*	306061	670495	Roadside	N/A	91%	-	15.2	16.8	15.1	15.8
DT4a, DT4b, DT4c	308314	672231	Roadside	N/A	100%	25.6	22.7	22.3	19.1	20.0
DT5N*	308856	672226	Roadside	N/A	100%	-	13.8	13.9	12.9	12.8
DT6	306403	666341	Urban Background	N/A	100%	9.7	10	9.0	7.6	8.0
DT7N*	304630	666968	Roadside	N/A	100%	-	12.1	17.1	11.3	10.2
DT8	294687	665030	Roadside	N/A	91%	21.7	18.8	17.7	16.3	17.1
DT9	293842	668588	Roadside	N/A	83%	20.4	18.2	16.7	18.0	18.3
DT10N*	297467	668734	Roadside	N/A	100%	-	14.9	17.5	12.3	12.9
DT11	297570	668586	Roadside	N/A	100%	21.5	17.2	17.7	15.4	15.7

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
DT12	297656	669298	Roadside	N/A	83%	21.1	23.4	20.0	17.5	23.3
DT13	300412	677124	Roadside	N/A	100%	8.2	7.4	6.7	6.1	8.4
DT14a, DT14b, DT14c*	297467	668734	Roadside	N/A	100%	19.3	18.5	18.3	14.4	14.9
DT15	299930	677070	Roadside	N/A	100%	18.4	17.3	17.1	14.7	15.0
DT16	299911	677052	Roadside	N/A	100%	21.3	20.8	18.4	15.9	17.5
DT17N*	297456	668937	Roadside	N/A	100%	-	15.9	16.0	14.3	14.3
DT18N*	293382	664389	Roadside	N/A	83%	-	8.4	9.3	6.6	7.9
DT19N*	294668	664931	Roadside	N/A	91%	-	17	16.0	14.7	15.3
DT20	300405	677118	Roadside	N/A	91%	17.9	18.1	17.2	14.0	14.3
DT21	308641	667912	Roadside	N/A	100%	11.9	10.2	10.8	10.2	10.1
DT22	308957	675025	Roadside	N/A	100%	13.8	12	13.1	9.3	10.8

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
DT23	309133	675028	Roadside	N/A	100%	13.5	11.3	11.8	9.4	9.9
DT24N**	299957	677067	Roadside	N/A	100%	-	17.8 (12.8)	18.9	15.5	15.7

*New sites added January 2022

** New site added October 2022

Shaded rows - results shown for these sites are averages of the 3 co-located tubes. Please see table B.1 for the results for each individual tube

☐ Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22

☒ Diffusion tube data has been bias adjusted.

☒ Reported concentrations are those at the location of the monitoring site (bias adjusted and annualised, as required), i.e. prior to any fall-off with distance correction.

Notes:

Exceedances of the NO₂ annual mean objective of 40 µg/m³ are shown in bold.

NO₂ annual means exceeding 60 µg/m³, indicating a potential exceedance of the NO₂ 1-hour mean objective are shown in **bold and underlined**.

Means for diffusion tubes have been corrected for bias. All means have been “annualised” as per LAQM.TG(22) if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

(3) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(4) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

Table A.5 – 1-Hour Mean NO₂ Monitoring Results, Number of 1-Hour Means > 200 µg/m³

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
CM1	300426	677172	Roadside	N/A	97.7	0	0	0	0	0
CM2	308314	672231	Roadside	N/A	97.4	0	0	0	0	0
CM3	309258	677728	Roadside	N/A	99.0	0	0	0	0	0

Notes:

Exceedances of the NO₂ 1-hour mean objective (200 µg/m³ not to be exceeded more than 18 times/year) are shown in bold.

If the period of valid data is less than 85%, the 99.8th percentile of 1-hour means is provided in brackets.

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

Table A.6 – Annual Mean PM₁₀ Monitoring Results (µg/m³)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2025 (%) ⁽²⁾	2021	2022	2023(Correction Factor applied to data in brackets)	2024	Correction factor applied to 2024 data (divide by 0.909) ⁽³⁾	2025	Correction factor applied to 2025 data (divide by 0.909)
CM1	300426	677172	Roadside	N/A	86	8.5	11.9	9(9.9)	9.0	9.9	10.3	11.4
CM2	308314	672231	Roadside	N/A	100	12	11.9	10(11.0)	9.3	10.2	11.3	12.4
CM3	309258	677728	Roadside	N/A	91	11.3	8.2	10(11.0)	9.9	10.9	10.5	11.5

Notes:

Exceedances of the PM₁₀ annual mean objective of 18 µg/m³ are shown in bold.

All means have been “annualised” as per LAQM.TG(22), valid data capture for the full calendar year is less than 75%. See Appendix C for details.

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

Table A.7 – 24-Hour Mean PM₁₀ Monitoring Results, Number of PM₁₀ 24-Hour Means > 50 µg/m³

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
CM1	300426	677172	Roadside	N/A	86	0	0	0	0	0
CM2	308314	672231	Roadside	N/A	100	0	2	0	0	2
CM3	309258	677728	Roadside	N/A	91	0	0	0	0	0

Notes:

Exceedances of the PM₁₀ 24-hour mean objective (50 µg/m³ not to be exceeded more than seven times/year) are shown in bold.

If the period of valid data is less than 85%, the 98.1st percentile of 24-hour means is provided in brackets.

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

Table A.8 – Annual Mean PM_{2.5} Monitoring Results (µg/m³)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2025 (%) ⁽²⁾	2021	2022	2023(Correction factor applied to data in brackets)	2024	Correction factor applied to 2024 data (multiply by 1.06) ⁽³⁾	2025	Correction factor applied to 2025 data
CM1	300426	677172	Roadside	N/A	86	5.4	6.5	5(5.3)	5.3	5.6	5.9	6.2
CM2	308314	672231	Roadside	N/A	100	6	6.3	5(5.3)	5.0	5.3	6.0	6.3
CM3	309258	677728	Roadside	N/A	91	7.3	4.6	6(6.36)	6.0	6.36	6.2	6.6

Notes:

Exceedances of the PM_{2.5} annual mean objective of 10 µg/m³ are shown in bold.

All means have been “annualised” as per LAQM.TG(22), valid data capture for the full calendar year is less than 75%. See Appendix C for details.

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

Appendix B: Full Monthly Diffusion Tube Results for 2025

Table B.1 – NO₂ 2025 Monthly Diffusion Tube Results (µg/m³)

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.78)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DT1N	309187	677663	18.6	17.1	19.2	17.6	12.3	13.0	11.9	10.4	13.0	14.7	13.5	16.2	14.8	11.5	N/A	
DT2N (Overall average)	309251	677723	19.4	17.4	18.8	16.7	12.9	12.6	10.9	11.8	12.9	15.2	19	16.1	15.3	12.0	N/A	
DT2Na	309251	677723	14.1	17.2	19.3	17.9	12.3	11.1	11.0	14.1	13.7	14.3	19.9	16.5	15.1	11.8	N/A	
DT2Nb	309251	677723	21.0	17.5	18.6	14.9	12.9	13.7	10.5	12.0	13.0	15.5	18.0	17.2	15.4	12.0	N/A	
DT2Nc	309251	677723	23.0	17.6	18.6	17.3	13.7	13.0	11.3	9.2	12.1	15.8	19.1	14.7	15.5	12.1	N/A	
DT3N	306061	670495	20.2	25.7	26.8	21.5	17.6	14.6	Not available	16.3	15.3	15.5	24.9	24.0	20.2	15.8	N/A	
DT4 (Overall average)	308314	672231	33.7	30.2	32.2	21.4	23.8	19.7	18.5	20.5	20.1	21.1	29.9	30.0	25.7	20.0	N/A	
DT4a	308314	672231	33.4	30.1	31.9	26.7	23.4	19.8	18.4	22.3	19.9	22.1	30.8	31.8	25.8	20.1	N/A	
DT4b	308314	672231	35.9	30.0	32.4	27.6	22.8	18.8	18.7	20.5	19.6	18.5	27.4	28.1	25.0	19.5	N/A	
DT4c	308314	672231	31.7	30.5	32.4	29.7	25.2	20.6	18.5	18.7	20.7	22.8	31.5	30.2	26.0	20.2	N/A	
DT5N	308856	672226	16.3	23.9	23.1	11.2	13.4	12.0	11.8	14.4	13.4	12.4	21.3	23.7	16.4	12.8	N/A	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.78)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DT6	306403	666341	16.9	12.6	14.0	9.9	6.1	6.8	6.5	7.2	7.7	6.4	13.1	15.2	10.2	8.0	N/A	
DT7N	304630	666968	9.6	15.4	18.0	15.6	9.8	10.3	10.3	11.4	10.8	11.8	16.5	16.8	13.0	10.2	N/A	
DT8	294687	665030	23.1	25.2	29.2	26.0	18.2	17.1	16.0	18.8	Not available	18.3	25.2	24.0	21.9	17.1	N/A	
DT9	293842	668588	23.6	29.4	27.8	22.6	20.2	Not available	Not available	19.7	19.1	23.7	25.8	23.0	23.5	18.3	N/A	
DT10N	293473	668944	20.2	20.8	22.3	17.3	12.7	14.1	10.2	13.7	15.2	14.7	16.5	20.9	16.6	12.9	N/A	
DT11	297467	668734	30.8	23.4	27.5	19.4	12.9	15.4	13.5	15.0	14.7	18.0	27.2	24.2	20.2	15.7	N/A	
DT12	297570	668586	35.1	32.7	30.4	24.4	Not available	16.4	14.2	17.8	19.8	19.1	Not available	22.6	22.6	23.3	N/A	
DT13	297656	669298	14.0	10.5	13.5	8.3	5.2	5.5	4.3	5.3	6.2	7.5	9.3	11.3	11.3	8.4	N/A	
DT14(overall average)	300412	677124	21.0	23.7	23.4	20.5	15.0	14.4	13.6	16.2	17.2	18.3	21.5	24.2	19.1	14.9	N/A	
DT14a	300412	677124	19.5	24.3	24.8	20.7	15.4	13.6	13.5	16.2	18.6	19.0	24.5	23.4	19.5	15.2	N/A	
DT14b	300412	677124	25.9	22.2	23.2	18.9	14.1	14.6	13.4	16.3	15.1	17.7	22.6	23.4	19	14.8	N/A	
DT14c	300412	677124	17.7	24.7	22.1	22.0	15.7	14.9	13.8	16.2	17.8	18.1	17.5	25.8	19.1	14.9	N/A	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.78)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DT15	299930	677070	22.9	22.4	29.2	20.9	16.3	13.7	14.5	14.1	14.6	16.0	23.9	23.0	19.3	15.0	N/A	
DT16	299911	677052	22.1	27.2	33.9	24.3	17.9	17.9	15.4	20.0	19.0	20.0	24.8	27.0	22.5	17.5	N/A	
DT17N	297456	668937	25.5	22.1	29.3	21.8	14.0	11.6	12.5	13.9	13.1	15.8	20.2	20.7	18.4	14.3	N/A	
DT18N	293382	664389	11.1	10.8	13.7	11.1	7.5	6.0	7.1	9.1	Not available	Not available	11.8	13.1	10.1	7.9	N/A	
DT19N	294668	664931	27.6	23.3	27.4	21.0	16.7	14.1	13.2	Not available	15.9	12.7	25.0	19.1	19.6	15.3	N/A	
DT20	300405	677118	Not available	23.7	21.5	18.6	16.5	14.5	13.3	14.9	17.8	17.1	22.7	21.6	18.4	14.3	N/A	
DT21	308641	667912	17.4	16.6	17.7	12.7	10.9	9.2	8.8	10.4	8.9	11.9	16.2	14.3	12.9	10.1	N/A	
DT22	308957	675025	19.1	17.2	18.1	13.6	9.5	9.8	7.7	11.6	12.8	13.3	17.6	15.8	13.8	10.8	N/A	
DT23	309133	675028	18.0	15.8	18.9	13.3	9.7	8.6	8.5	9.7	7.8	11.7	12.5	17.4	12.7	9.9	N/A	
DT24N	299957	677067	27.0	24.7	18.1	21.1	16.5	15.5	14.6	18.0	16.9	19.8	23.3	25.4	20.1	15.7	N/A	

- ☒ All erroneous data has been removed from the NO₂ diffusion tube dataset presented in Table B.1.
- ☐ Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22.
- ☐ Local bias adjustment factor used.
- ☒ National bias adjustment factor used.

☐ Where applicable, data has been distance corrected for relevant exposure in the final column.

☒ West Lothian Council confirm that all 2025 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System.

Notes:

Exceedances of the NO₂ annual mean objective of 40 µg/m³ are shown in **bold**.

NO₂ annual means exceeding 60 µg/m³, indicating a potential exceedance of the NO₂ 1-hour mean objective are shown in **bold and underlined**.

See Appendix C for details on bias adjustment and annualisation.

Table B.2 - Historical Monthly Diffusion Tube Results – 2021 to 2025

SITE ID	2021 Raw data	2021 Bias adjusted data	2022 Raw data	2022 Bias adjusted data	2023 Raw data	2023 Bias adjusted data	2024 Raw data	2024 Bias adjusted data	2025 Raw data	2025 Bias adjusted data
DT1N*	-	-	14.5	11.0	15.2	11.7	14.5	11.3	14.8	11.5
DT2N*	-	-	18.6	14.1	17.1	13.2	15.1	11.8	15.3	12.0
DT3N*	-	-	20.0	15.2	21.8	16.8	19.3	15.1	20.2	15.8
DT4	32.8	25.6	29.8	22.7	29.0	22.3	24.5	19.1	25.7	20.0
DT5N*	-	-	18.1	13.8	18.1	13.9	16.5	12.9	16.4	12.8
DT6	12.4	9.7	13.1	10	11.7	9.0	9.7	7.6	10.2	8.0
DT7N*	-	-	15.9	12.1	22.3	17.1	14.4	11.3	13.0	10.2
DT8	21.9	14.9	24.7	18.8	23.0	17.7	20.9	16.3	21.9	17.1
DT9	18.5	12.6	24.0	18.2	21.8	16.7	23.1	18.0	23.5	18.3
DT10N*	-	-	19.6	14.9	22.8	17.5	15.7	12.3	16.6	12.9
DT11	13.4	9.1	22.6	17.2	23.0	17.7	19.8	15.4	20.2	15.7
DT12	22.5	15.3	30.8	23.4	26.0	20.0	22.5	17.5	22.6	23.3
DT13	8.9	6.1	9.7	7.4	8.7	6.7	7.9	6.1	11.3	8.4
DT14	20.4	13.9	24.3	18.5	23.8	18.3	18.5	14.4	19.1	14.9
DT15	17.3	11.8	22.7	17.3	22.2	17.1	18.8	14.7	19.3	15.0
DT16	20.3	13.8	27.4	20.8	23.9	18.4	20.3	15.9	22.5	17.5

DT17N*	-	-	20.9	15.9	20.8	16.0	18.4	14.3	18.4	14.3
DT18N*	-	-	11.0	8.4	12.1	9.3	8.5	6.6	10.1	7.9
DT19N*	-	-	22.3	17	20.8	16.0	18.8	14.7	19.6	15.3
DT20	20.4	13.9	23.8	18.1	22.4	17.2	17.9	14.0	18.4	14.3
DT21	9.3	6.3	13.4	10.2	14.0	10.8	13.1	10.2	12.9	10.1
DT22	13.3	9.0	15.8	12	17.1	13.1	11.9	9.3	13.8	10.8
DT23	17.3	13.5	14.8	11.3	15.4	11.8	12.1	9.4	12.7	9.9
DT24N**	-	-	23.4(16.9)***	17.8(12.8)***	24.5	18.9	19.9	15.5	20.1	15.7

* New site added in January 2022

** New site added in October 2022

*** Annualised data in brackets – due to low data capture

NB: DT2N, DT4 and DT14 sites all have 3 tubes co-located with the continuous monitors.

Appendix C: Supporting Technical Information / Air Quality Monitoring Data QA/QC

New or Changed Sources Identified Within West Lothian Council During 2025

West Lothian Council has not identified any new sources relating to air quality within the reporting year of 2025.

Additional Air Quality Works Undertaken by West Lothian Council During 2025

West Lothian Council has not completed any additional works within the reporting year of 2025.

QA/QC of Diffusion Tube Monitoring

The supplier used for diffusion tubes within 2025 in West Lothian was SOCOTEC and the method of preparation that was used was by spiking Acetone: Triethanolamine (50:50) onto the grids prior to the tubes being assembled. The tubes were desorbed with distilled water and the extract analysed using a segmented flow auto analyser with ultraviolet detection. The lab used for analysis was SOCOTEC Didcot. The samples have been analysed in accordance with SOCOTEC's standard operating procedure ANU/SOP/1015. This method meets the guidelines set out in DEFRA's 'Diffusion Tubes for Ambient NO₂ Monitoring: Practical Guidance'. As set out in the practical guidance, the results were initially calculated assuming an ambient temperature of 11°C, the reported values have been adjusted to 20°C to allow for direct comparison with EU limits. This analysis of diffusion tube samples to determine the amount of nitrogen dioxide present on the tube is within the scope of our UKAS schedule. Any further calculations and assessments requiring exposure details and conditions fall outside the scope of our accreditation. In the AIR PT inter comparison scheme for comparing spiked Nitrogen Dioxide diffusion tubes, SOCOTEC currently holds the highest rank of a Satisfactory laboratory. The same diffusion tube supplier was used in West Lothian throughout 2025.

West Lothian Council changed the diffusion tubes in accordance with the LAQM Nitrogen Dioxide Diffusion tube monitoring calendar throughout 2025.

Diffusion Tube Annualisation

All diffusion tube monitoring locations within West Lothian Council recorded data capture of 75% therefore it was not required to annualise any monitoring data. In addition, any sites with a data capture below 25% do not require annualisation.

Diffusion Tube Bias Adjustment Factors

West Lothian Council have applied a national bias adjustment factor of 0.78 to the 2025 monitoring data. A summary of bias adjustment factors used by West Lothian Council West Lothian Council over the past five years is presented in

Table C.1.

National and local bias adjustment factors were derived for comparison - 0.78 (national) and 0.76 (local). The national bias adjustment factor was calculated using Version 3/26 of the national spreadsheet. 17 studies in total were applicable to this version of the spreadsheet. The local bias adjustment factor was calculated using the Diffusion tube data Processing tool (version 6 – see Table C.2). A summary of bias adjustment factors used by West Lothian Council over the past five years is presented in Table C.1. The data in Table B.1 has the national bias adjustment factor applied.

With reference to LAQM TG22 Chapter 7 Box 7-13, it was decided to apply the national bias adjustment factor to the 2025 monitoring data for the following reasons:

- Diffusion tubes are changed monthly, but had they been changed more frequently, this would have favoured the use of the local bias adjustment factor;
- There are no unusual situations with any of the co-located sites; and
- The diffusion tube study was not less than 12 months.

Therefore, a national factor has been used for the diffusion tube bias adjustment factor.

Table C.1 – Bias Adjustment Factor

Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2025	National	03/26	0.78
2024	National	04/25	0.78
2023	National	03/24	0.77
2022	National	03/23	0.76
2021	National	03/22	0.78

NO₂ Fall-off with Distance from the Road

No diffusion tube NO₂ monitoring locations within West Lothian Council required distance correction during 2025.

QA/QC of Automatic Monitoring

The data management and LSO duties are carried out by Environmental Health Officers and Public Health Protection Officers at West Lothian Council. Manual calibrations were initially carried out every 2 weeks in 2025 during January to April. Then in May 2025, calibrations moved to once a month on the NO_x analysers at each of the three automatic monitoring stations. Audits are carried out every 6 months by Ricardo AEA Technology and servicing is also carried out every 6 months by an engineer from West Lothian Councils maintenance contractor. Initially, Enviro Technology were providing maintenance services to the Council. In June 2025, after a procurement exercise, ESU1 were appointed as the air quality maintenance contractor for the 3 continuous monitoring sites. Ratification of the data is carried out by Ricardo AEA, and the monitoring data presented within the APR is ratified. Live and historic data is currently available on the [Scottish Air quality](#) website.

PM₁₀ and PM_{2.5} Monitoring Adjustment

The Scottish Government issued Guidance Note “Measurement of Ambient Particulate Matter (PM) and the LAQM Reporting of Measured Concentrations – May 2023” which requires the application of a correction factor to PM₁₀ and PM_{2.5} concentrations with Palas Fidas 200 analysers in operation. Corrected and uncorrected results are displayed in Tables A.6 and Table A.8. The correction factors have only been applied to 2022, 2023, 2024 and 2025 data as the guidance was issued in 2023. The results remained below the objectives.

Automatic Monitoring Annualisation

All automatic monitoring locations within West Lothian Council recorded data capture of greater than 75% therefore it was not required to annualise any monitoring data. In addition, any sites with a data capture below 25% do not require annualisation.

NO₂ Fall-off with Distance from the Road

No automatic NO₂ monitoring locations within West Lothian Council required distance correction during 2025.

Table C.2 – Local Bias Adjustment Calculations

	Local Bias Adjustment Input 1	Local Bias Adjustment Input 2	Local Bias Adjustment Input 3
Periods used to calculate bias	11	12	10
Bias Factor A	0.77 (0.71-0.83)	0.75 (0.71-0.79)	0.76 (0.71-0.81)
Bias Factor B	31% (21%-40%)	33% (27%-40%)	32% (23%-41%)
Diffusion Tube Mean ($\mu\text{g}/\text{m}^3$)	18.9	25.7	15.3
Mean CV (Precision)	6.2%	5.0%	5.7%
Automatic Mean ($\mu\text{g}/\text{m}^3$)	14.5	19.2	11.6
Data Capture	100%	100%	100%
Adjusted Tube Mean ($\mu\text{g}/\text{m}^3$)	15 (13-16)	19 (18-20)	12 (11-12)

Notes:

A combined local bias adjustment factor of 0.76 has been generated. This has been calculated in line with the guidance in LAQM.TG22 – Chapter 7, by averaging the Bias Factor B values. In the three co-location sites, we have Bias Factor B values of 31%, 33% and 32%. These are then expressed as factors i.e. 0.31, 0.33 and 0.32. Next, 1.00 is added to all three factors to become 1.31, 1.33 and 1.32. Then, the inverse of these values is taken i.e. $1/1.31$, $1/1.33$, $1/1.32$ to give values of 0.76, 0.75 and 0.76. Once these figures are added together and divided by 3 – the local factor produced is 0.76.

Table C.3 - Local Bias Adjustment Calculations from diffusion tube spreadsheet

Local Bias Adjustment Outputs - Information Only

Go back to STEP 3 - Bias Adjustment to define factor							
	STEP 3a Local Bias Adjustment Input 1	STEP 3b Local Bias Adjustment Input 2	STEP 3c Local Bias Adjustment Input 3	STEP 3d Local Bias Adjustment Input 4	STEP 3e Local Bias Adjustment Input 5	STEP 3f Local Bias Adjustment Input 6	STEP 3g Local Bias Adjustment Input 7
Periods used to calculate bias	11	12	10				
Bias Adjustment Factor A	0.77 (0.71 - 0.83)	0.75 (0.71 - 0.79)	0.76 (0.71 - 0.81)				
Diffusion Tube Bias B	31% (21% - 40%)	33% (27% - 40%)	32% (23% - 41%)				
Diffusion Tube Mean ($\mu\text{g}/\text{m}^3$)	18.9	25.7	15.3				
Mean CV (Precision)	6.2%	5.0%	5.7%				
Automatic Mean ($\mu\text{g}/\text{m}^3$) (for periods used to calculate bias)	14.5	19.2	11.6				
Data Capture (for periods used to calculate bias)	100%	100%	100%				
Overall Data Capture	100%	100%	100%				
Adjusted Tube Mean ($\mu\text{g}/\text{m}^3$)	15 (13 - 16)	19 (18 - 20)	12 (11 - 12)				
Overall Diffusion Tube Precision	Good Overall Precision	Good Overall Precision	Good Overall Precision				
Overall Continuous Monitor Data Capture	Good Overall Data Capture	Good Overall Data Capture	Good Overall Data Capture				
Combined Local Bias Adjustment Factor	0.76						

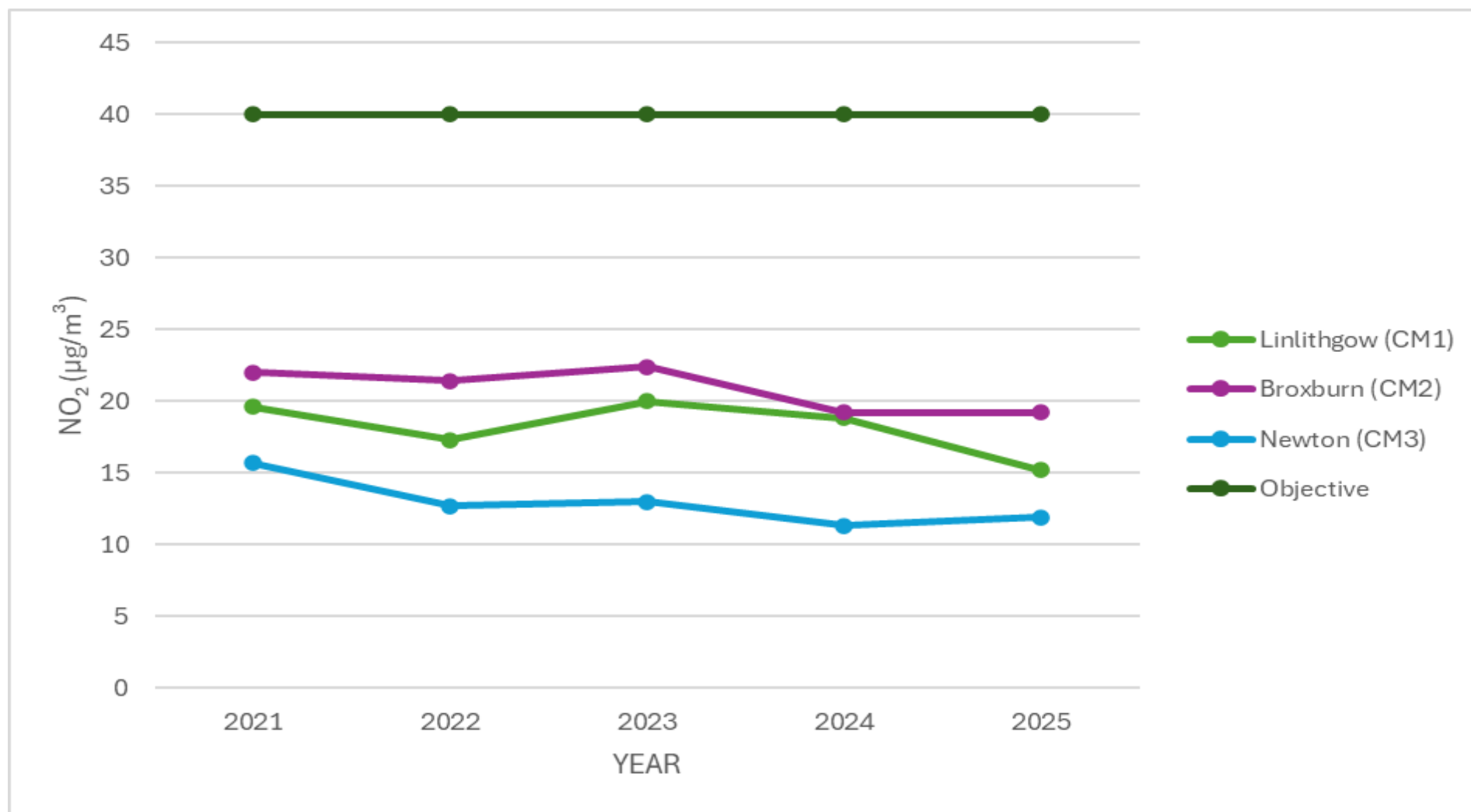
Figure 1 - Pollutant trend graphs over the past 5 years - NO₂ trend graph 2021 to 2025

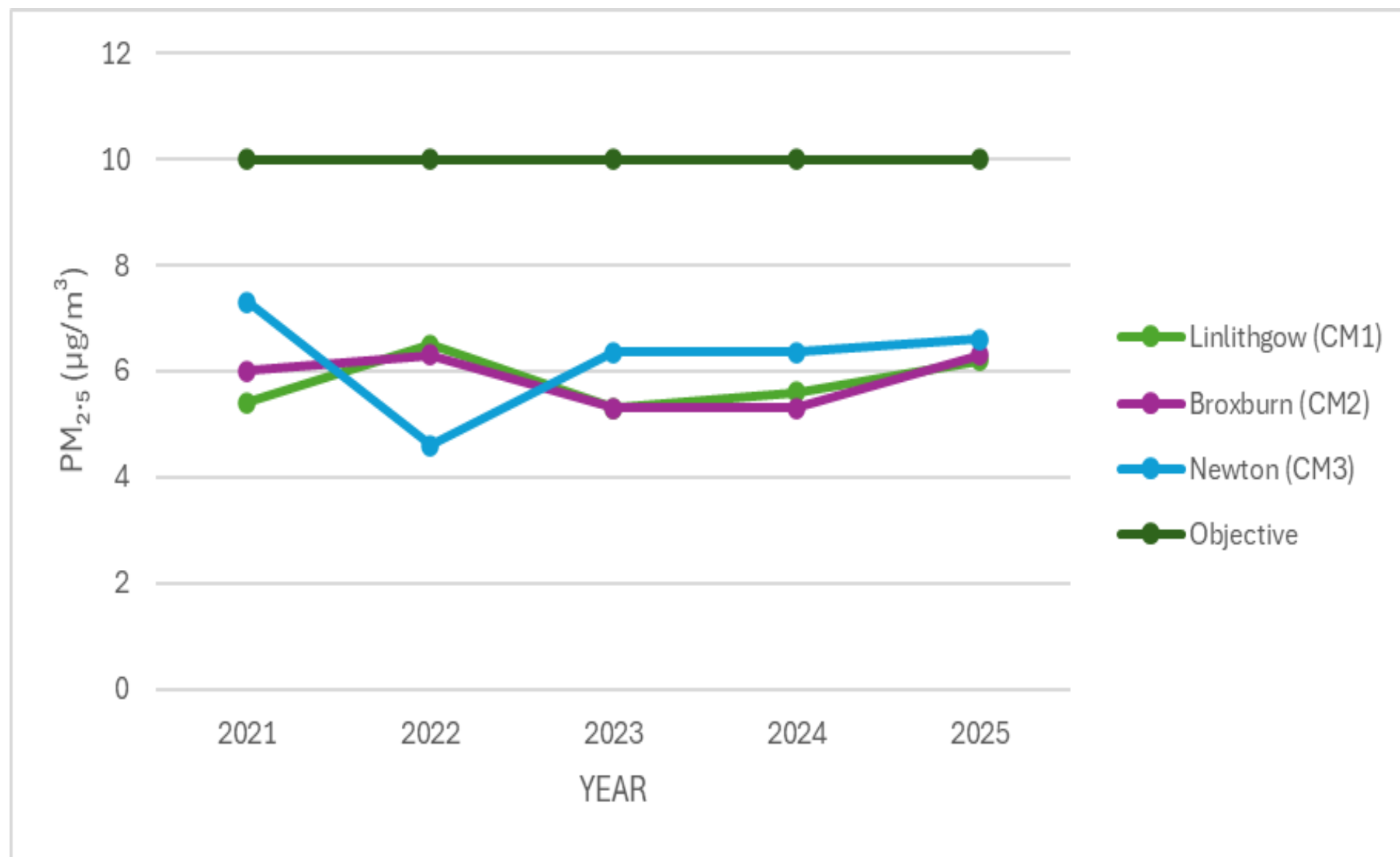
Figure 2 - Pollutant trend graph over the past 5 years - PM_{2.5} trend graph 2021 to 2025

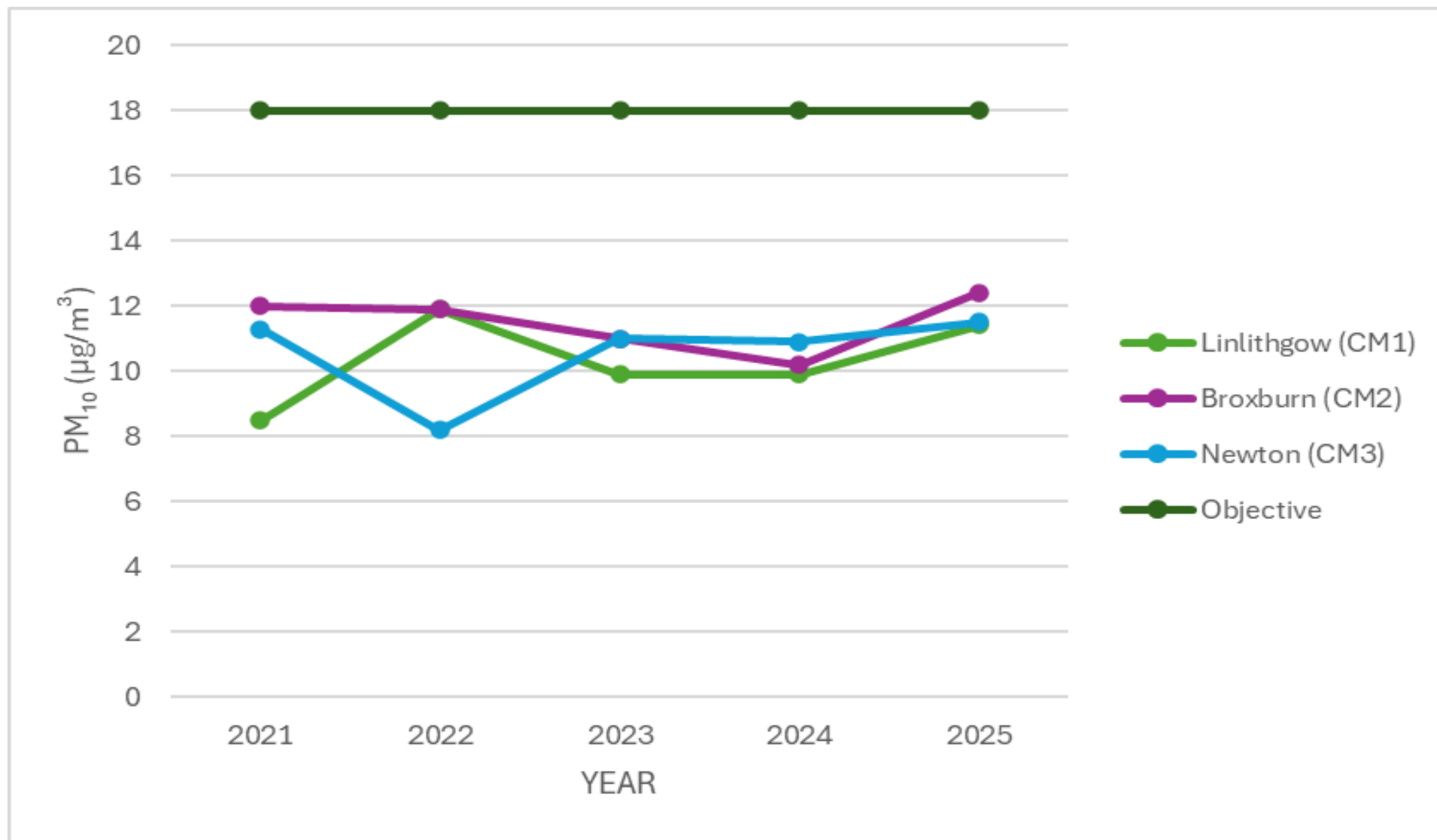
Figure 3 - Pollutant trend graphs over the past 5 years – PM₁₀ trend graph 2021 to 2025

Figure 4 - Pollutant trend graphs over the past 5 years – NO₂ from Diffusion Tubes trend graph 2021 to 2025

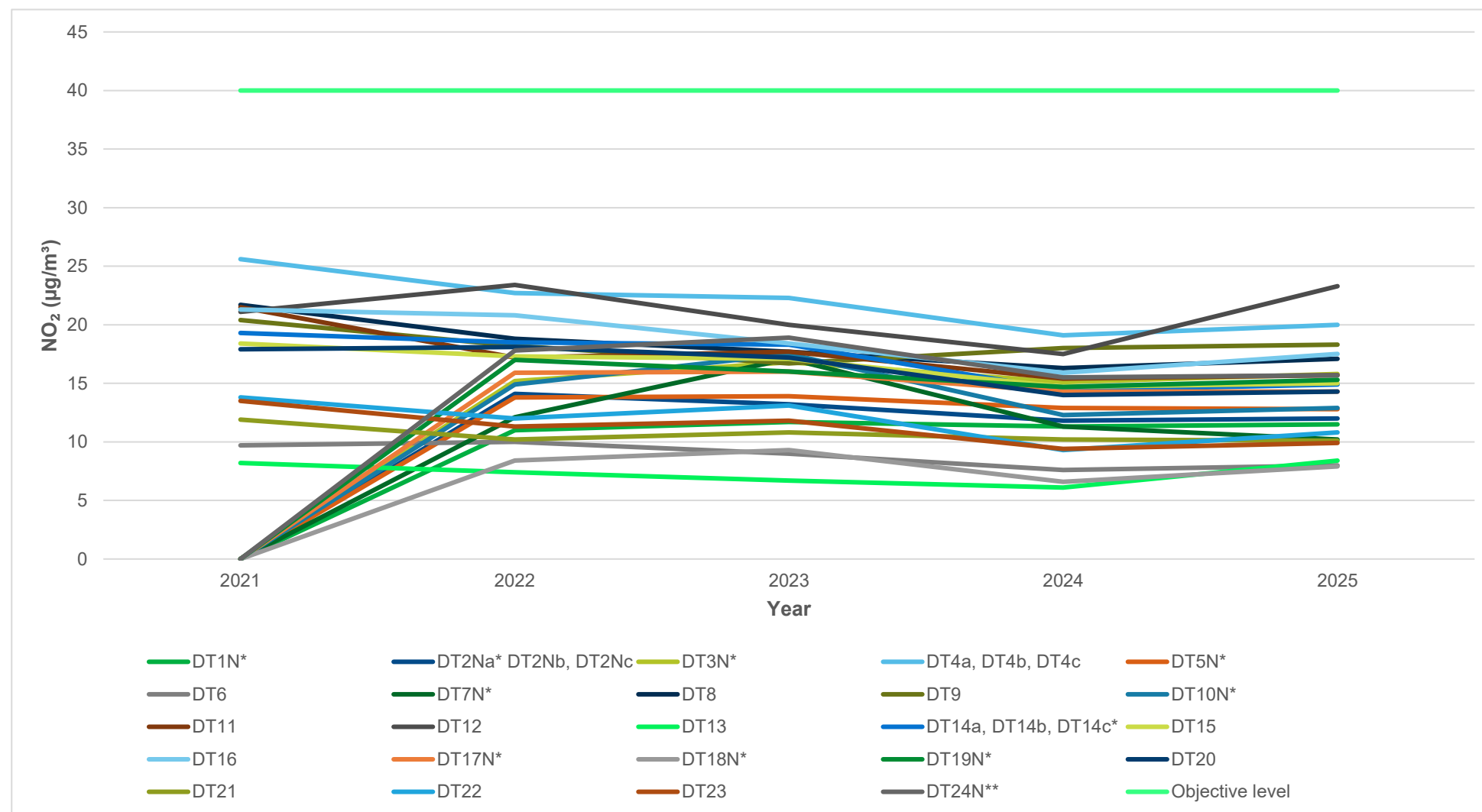


Figure 5 – Map of Diffusion Tubes, West Lothian Council area

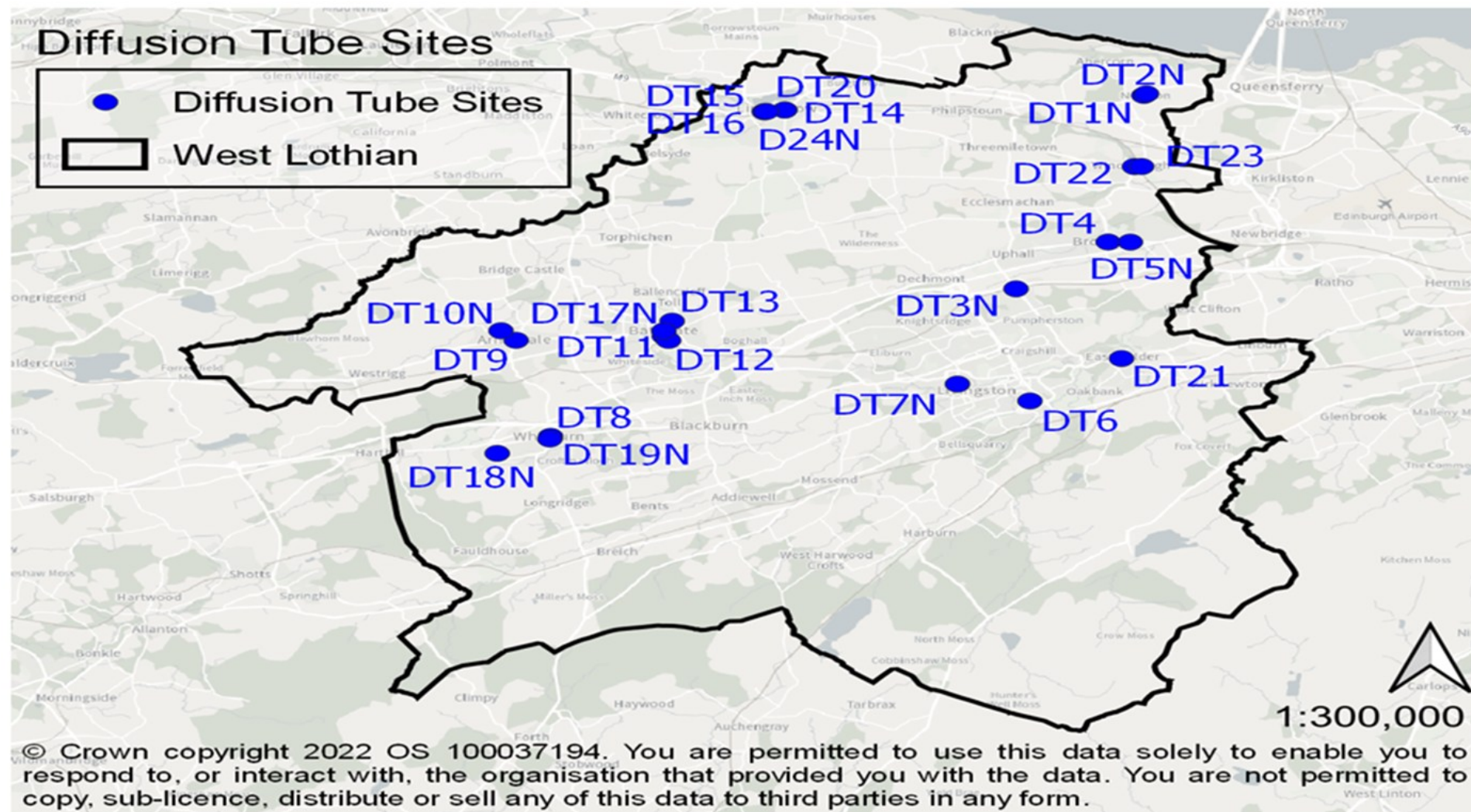


Figure 6 – Map of Continuous Monitors, West Lothian Council area

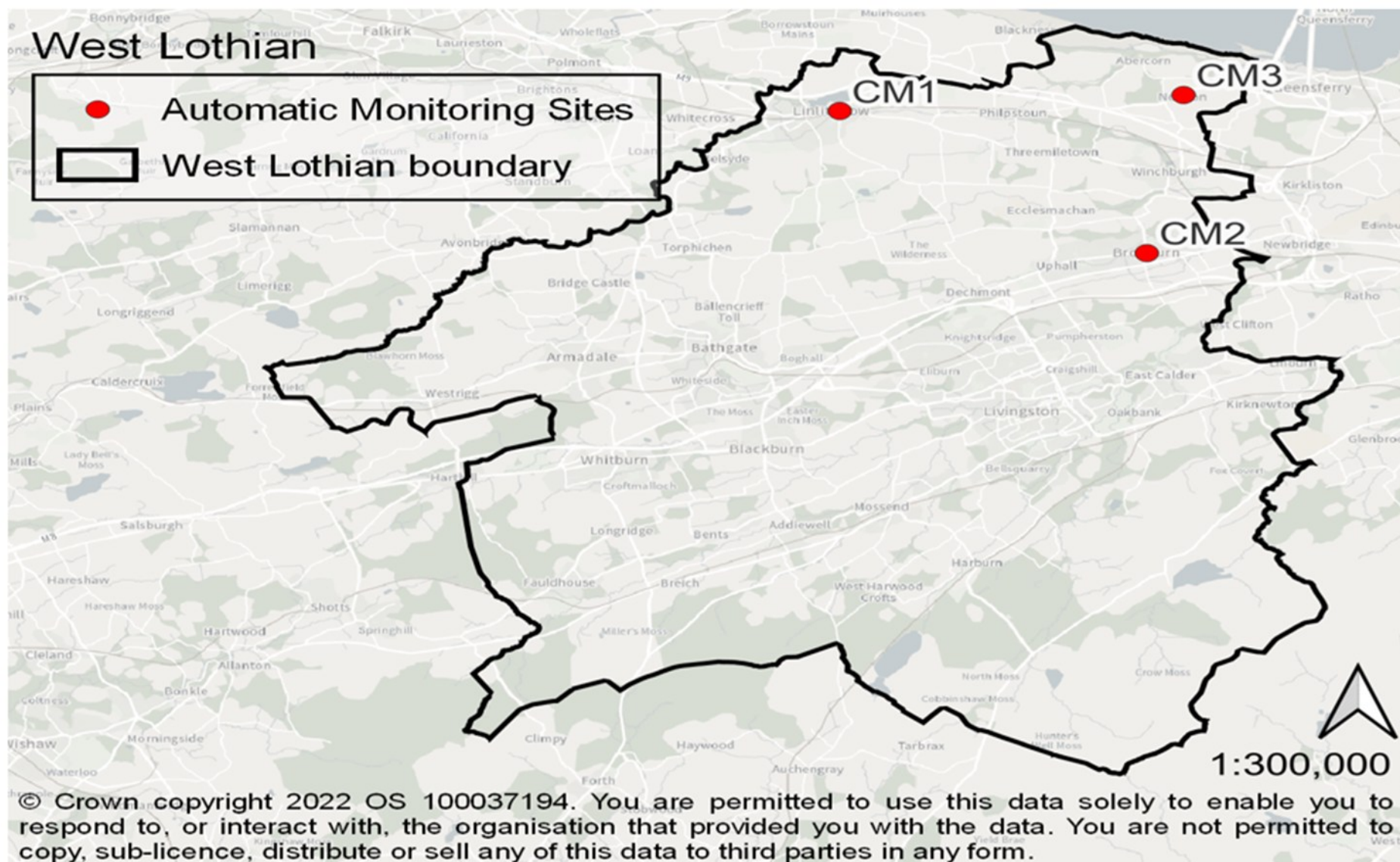


Figure 7 – Continuous Monitor 1 – High Street, Linlithgow

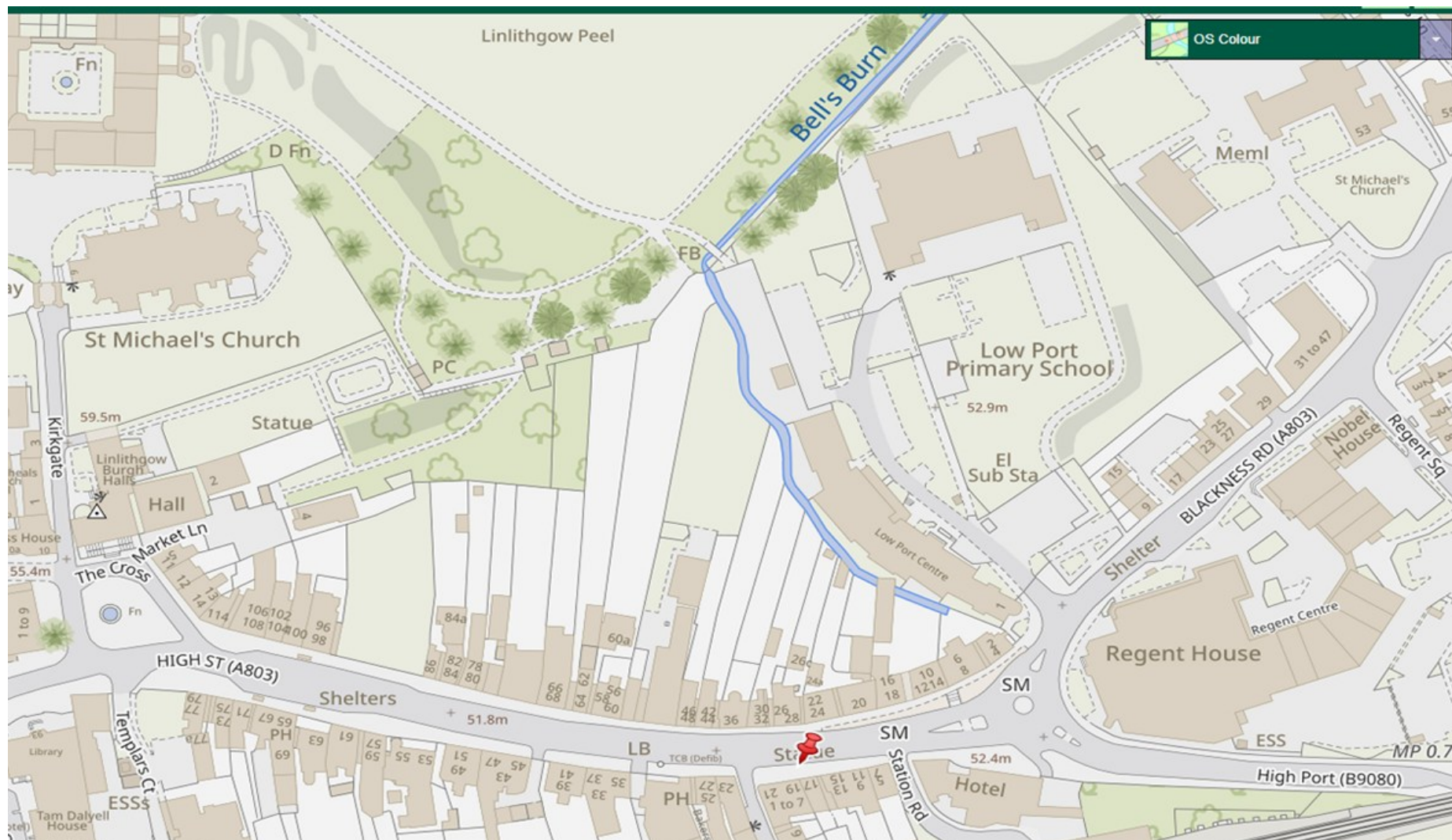


Figure 8 – Continuous Monitor 2 - East Main Street, Broxburn

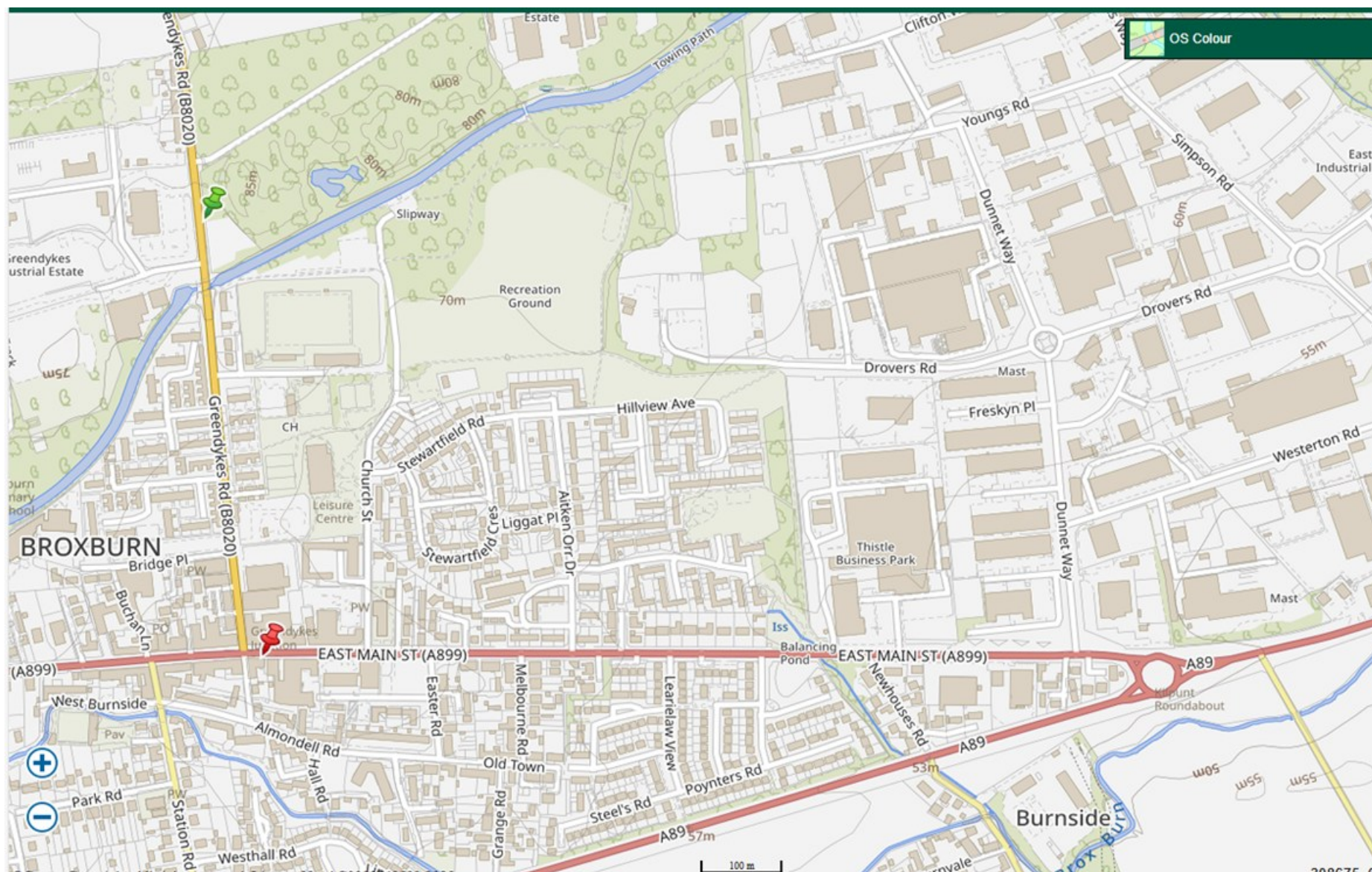
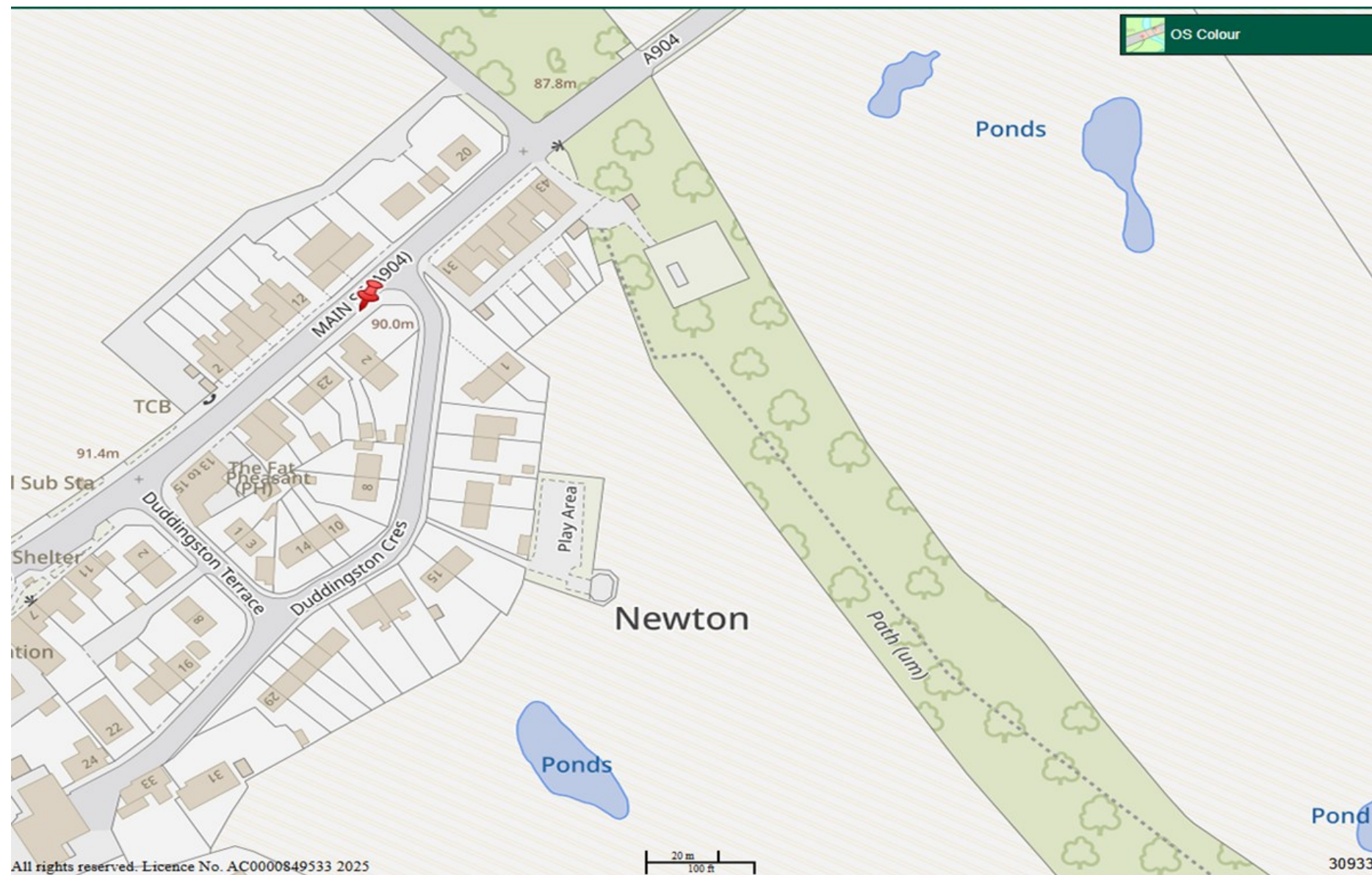


Figure 9 – Continuous Monitor 3 - Main Street, Newton

Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the LA intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
APR	Annual Progress Report
AURN	Automatic Urban and Rural Network (UK air quality monitoring network)
Defra	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by Highways England
DT	Diffusion Tube
FDMS	Filter Dynamics Measurement System
LAQM	Local Air Quality Management
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
PM ₁₀	Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less
PM _{2.5}	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less

QA/QC	Quality Assurance and Quality Control
SO ₂	Sulphur Dioxide

References

1. West Lothian Council Air Quality Planning Guidance

https://www.westlothian.gov.uk/media/33857/PG-Planning-Guidance-Air-QualityAdopted-April-2019/pdf/Air_Quality_Planning_Guidance.pdf?m=637074440000830000

2. Local Authority Guidance Note for LAQM Reporting of Scottish PM data

<https://www.scottishairquality.scot/technical-reports/local-authority-guidance-note-laqm-reporting-scottish-pm-data>

3. DEFRA – LAQM.TG22 Local Authority Guidance

[UK Regions \(exc. London\) Technical Guidance | LAQM](#)

4. Local Air Quality Management – New Technical Guidance

[Local Air Quality Management - New Technical Guidance TG\(22\) | Scottish Air Quality](#)

5. West Lothian Council Air Pollution webpage

[Air Pollution - West Lothian Council](#)

6. West Lothian Council Active Travel Plan

https://www.westlothian.gov.uk/media/64562/Active-Travel-Plan-for-West-Lothian-20242029-Making-Active-Connections/pdf/2024-29_ATP_-_REPORT_-_FINAL_Rotated.pdf.

7. West Lothian Local Development Plan - LDP1 and LDP2

<https://www.westlothian.gov.uk/LDP>

<https://www.westlothian.gov.uk/ldp2-updates>

8. Scottish Air Quality website – Diffusion Tube Information West Lothian Council

<https://www.scottishairquality.scot/latest>

9. DEFRA diffusion tube data processing tool

<https://laqm.defra.gov.uk/air-quality/air-quality-assessment/diffusion-tube-data-processing-tool/>

10. West Lothian Council – details of South of Scotland EV Charging Collaboration

<https://www.westlothian.gov.uk/article/86866/South-of-Scotland-Electric-Vehicle-Charging-Strategy>